



Lake Mead

NATIONAL RECREATION AREA



Business Plan
Executive Summary
December 1999

Introduction

This document summarizes the park's Business Plan, which analyzes the park's funding history, current funding levels, functional responsibilities and standards, operations and maintenance funding needs, and investment shortfalls. Also included in this summary is an overview of the park's planned response to its funding shortfalls.

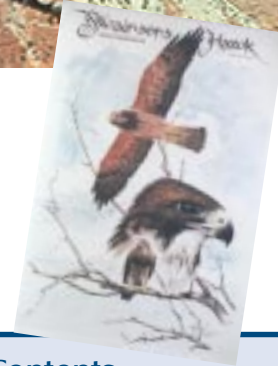
The Business Plan shows that Lake Mead National Recreation Area (NRA) had a total FY98 operations and maintenance budget need of \$25 million. Entrance stations scheduled to open in FY2000 will increase that total to \$26 million. Of this amount, \$16.4 million was funded by congressionally appropriated and other sources, leaving a shortfall of over \$9.6 million. Staffing levels are at 50% of the projected need. In response, the park has identified \$2.7 million in target funding sources and cost cutting strategies, outside the congressional appropriations process, leaving \$6.9 million in unmet operational needs.

The park's investment shortfall is over \$175 million. In addition, the park has \$3.25 million in land acquisition priorities, plus \$6.5 million worth of outstanding mineral interest (all within the park's authorized boundary). The park has identified a variety of traditional and nontraditional funding sources and set an average annual funding target of \$14.8 million to apply towards the park's investment shortfalls.

Business Plan Initiative

The National Park Service's Business Plan Initiative represents a unique partnership between the National Park Service and the National Parks and Conservation Association, with the generous support of The Henry P. Kendall Foundation, The Roy A. Hunt Foundation, Walter & Elise Haas Fund, Compton Foundations, Inc., and Vira I. Heinz Endowment. The initiative's purpose is to increase the financial management capabilities in park units thus enabling the Park Service to more clearly communicate with principal stakeholders.

Lake Mead NRA wants to recognize and pay special thanks to our Business Plan consultants, Simran Chopra, Carnegie Mellon University, and Danielle Dahlby, Dartmouth College. Their knowledge, dedication, and hard work, resulted in a meaningful and professional Business Plan.



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Statement Of Significance

Lake Mead National Recreation Area (NRA) is the premiere inland water recreation area in the West with 1.5 million acres including 200,000 surface acres of water and 950 miles of shoreline on Lakes Mead and Mohave. It represents superlative examples of the plants, animals and physical geography of the Mojave Desert and the Colorado Plateau and Basin and Range geologic provinces. The park includes many regionally and nationally significant natural resource components including populations of federally listed threatened and endangered species of animals, birds, fish and plants. The area also represents a 10,000 year continuum of cultural resources from prehistoric to historic sites including several culturally sensitive areas with sacred and traditional significance to contemporary Native Americans.

Lake Mead NRA provides a wide variety of unique outdoor recreation opportunities ranging from warm-water recreation to exploration of rugged and isolated backcountry making it a wilderness park in an urban setting. The area generates over 500 million dollars for the local economy. Lake Mead NRA serves as a major focus in the western United States for public outdoor water recreation, which is at a premium in this desert environment. The area is within a half-day's drive of 20 million people in the Los Angeles Basin and 3 million people in the Phoenix Metropolitan Area, as well as within a 20-minute drive of the 1.3 million people in the Las Vegas Valley, with 4 to 6,000 new residents per month, and 33 million visitors per year, making it the fastest-growing urban community and tourism destination in the country. Lake Mead NRA receives over 9 million visitors a year.

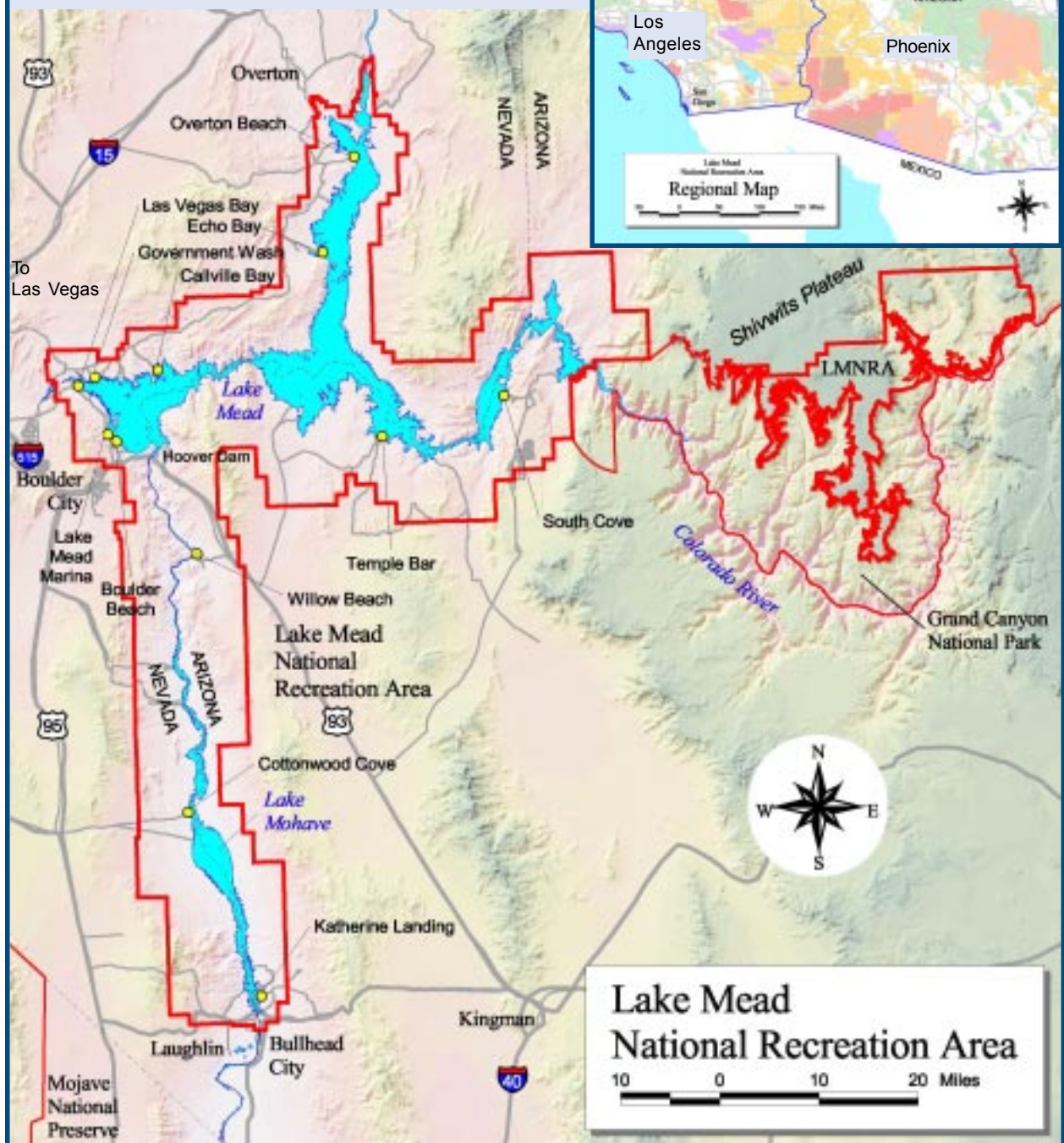


Park at a Glance

- 1.5 million Acres
- 950 miles Shoreline
- 400 Coves
- 40 Desert Springs
- 900 Plant Species
- 508 Vertebrate Species
- 24 Species Under Consideration as Threatened or Endangered
- 1,610 Archeological Sites
- 55 Historic Structures
- 1.8 billion Years of Geology
- 9.1 million Annual Visitors
- 1,452 Campsites
- 13 Campgrounds
- 10 Picnic Areas
- 12 Concessions Operations
- 85 Incidental Business Permits
- 116 Vacation Cabin Site Leases
- 13 Launch Ramps
- 336 miles Paved Roads
- 816 miles Unpaved roads
- 195 Full Time Employees
- 100,000 Volunteer Hours
- 348 Buildings and Structures
- 3,726 Road Signs
- 124 Trail Signs
- 3 Bridges
- 3 Airstrips
- 12,802 Parking Spaces
- 1 Visitor Center
- 10 Contact Stations
- 7 Fire Stations
- 122 Restrooms
- 56 Housing Facilities
- 10 Wastewater Plants
- 9 Water Plants
- 265 miles Water Lines
- 133 miles Sewer Lines
- 57 tons Recycled Materials Annually

Lake Mead

National Recreation Area



Strategic Planning

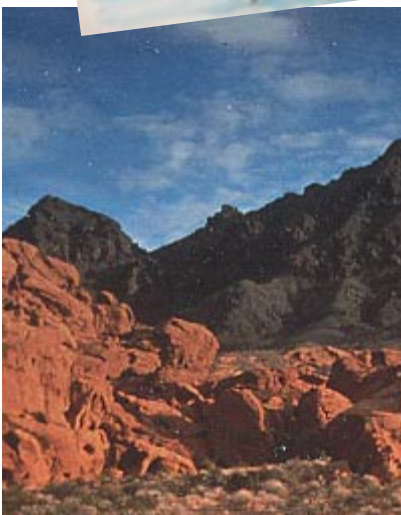
In 1995, the National Park Service began actively working to comply with the Government Performance and Results Act (GPRA) to develop an outcome-based performance management system. This act requires both strategic planning and performance measurement—setting goals and reporting results. GPRA seeks to make the federal government more accountable to the American people in its actions and expenditures. The National Park Service, with its mandate to preserve the nation's parks and treasures, can and must demonstrate its value to the American people.

Lake Mead NRA initiated its present strategic planning initiative in January 1988. A basic mission, long-term goals, and desired future conditions were developed for the park. This was used as a basis for the park's first strategic plan and annual work program. In 1994, the park developed vision and value statements and added them to the plan. GPRA outcome-based performance requirements were added in 1995. In 1998, the park further refined its strategic plan by identifying the specific items requiring special attention (++ items) if we were to accomplish our GPRA-related goals.

The following charts summarize *what we do*, *how we do it*, and *who does it*. GPRA goals and priorities for outcome-based accomplishments (++ items) are also noted, followed by a graphic representation of the percent funding and source allocated to each GPRA mission goals.

What We Do

Mission (business we're in)	Vision (standard we've set)
<ul style="list-style-type: none">-Provide diverse inland water recreation opportunities-in a spectacular setting-for present and future generations	<ul style="list-style-type: none">To be the Premier Inland Water Recreation Area in the West"Best in the West"



How We Do It

GPRA Goal I

Preserve Park Resources

Resource Preservation

- ++stop harm
- ++maintain vital signs
- ++environmental education

Spectacular Setting

- ++clean water
- ++minimum intrusion by development
- ++litter free

GPRA Goal II

Provide for the Public
Enjoyment and Visitor
Experience of parks

Recreation Opportunities

Information

- ++all visitors have access to basic information

Safety/Security

- ++safety and security at shoreline access areas and on the water

Visitor Service

- ++NPS employees with partners are respectful and helpful to all visitors

Diversity

- ++range of quality experiences (primitive - urban) and services
- ++wide affordable range of facilities

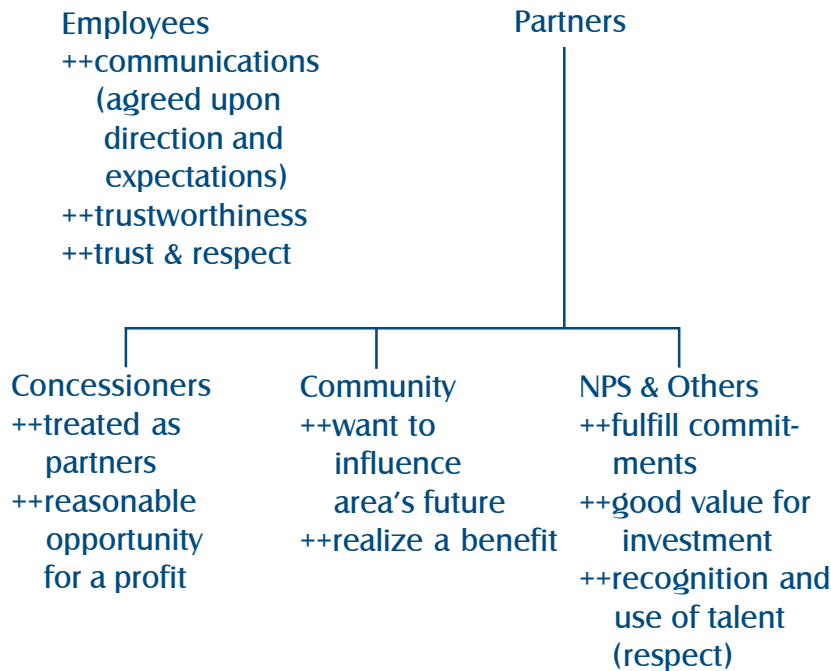
++ = items make it work

GPRA = Government Performance and Results Act



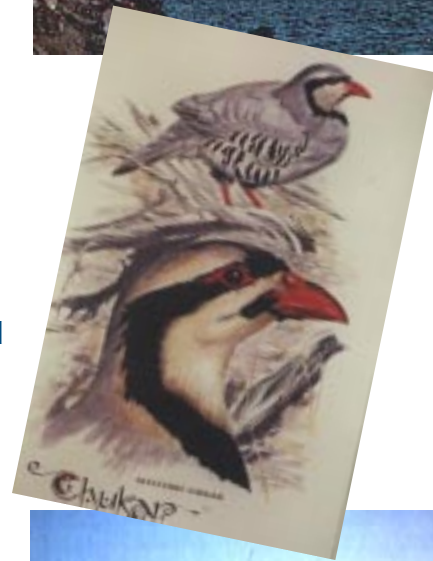
Who Does It

GPRA Goal IV Ensure Organizational Effectiveness



++ = items make it work

GPRA = Government Performance and Results Act



Funding Spent on Mission Goals

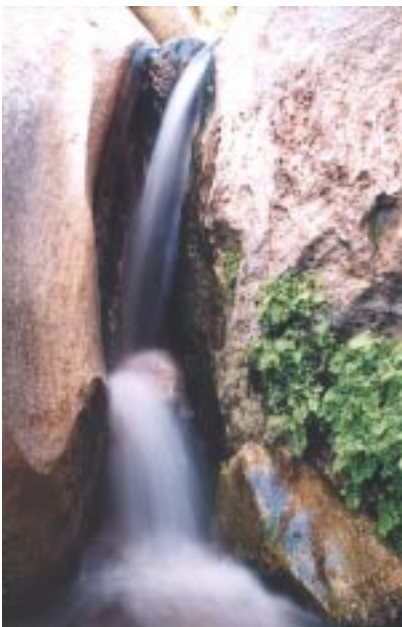


Operations and Maintenance Budget Overview

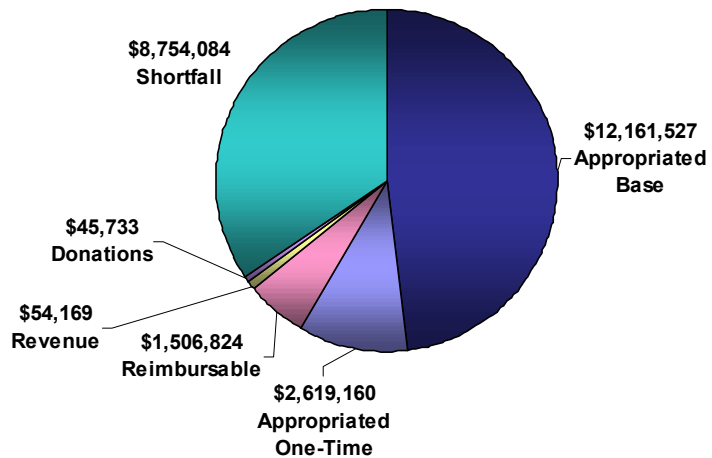
Lake Mead NRA had a total FY98 operations and maintenance budget and staffing need of \$25.1 million and 410 FTEs (1 FTE equals one person working one year.) FY98 funding, from all sources, totalled \$16.4 million and supported 203 FTEs, a shortfall of \$8.8 million dollars and 207 FTEs.

Functional area shortfalls were most significant in the areas of visitor experience and enjoyment (\$3.7 million shortfall) and facility operations (\$2.8 million shortfall). Resource protection had a shortfall of nearly \$1 million, management and administration had a \$0.6 million shortfall, as did maintenance.

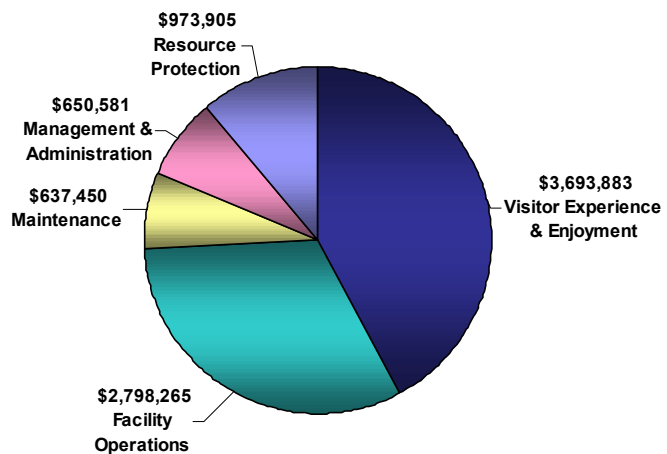
The spreadsheet on the following two pages details the park's operational budget and shortfalls by functional area.



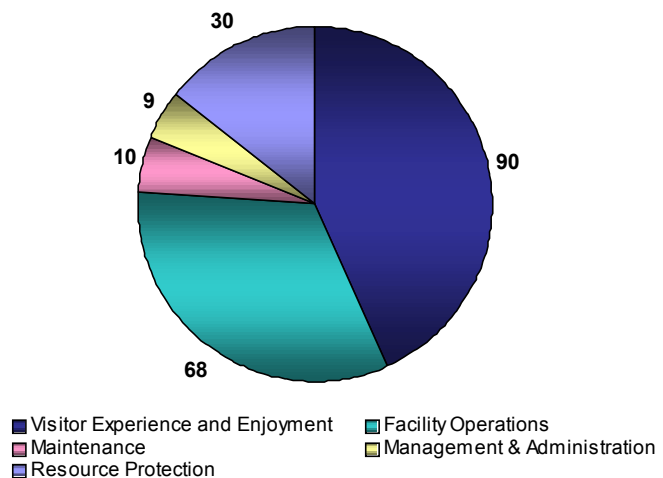
FY98 Operations & Maintenance Funding by Source
Total Funding Need = 25.1 million



FY98 Operations and Maintenance Funding Shortfalls by Function - Total Shortfall = \$8,754,084



FY98 FTE Shortfalls - Total = 207 FTE



LAKE MEAD NATIONAL RECREATION AREA

						FY98 Funding	
						Appropriated	
				Required Funding	Required FTE	Base	One-time
Visitor Experience and Enjoyment							
	Concessions	\$	327,013	6.46	\$	244,465	\$ -
	Informal Interpretation	\$	533,631	12.50	\$	79,035	\$ -
	Formal Interpretation	\$	92,908	2.30	\$	65,290	\$ -
	Environmental Education	\$	266,749	7.55	\$	178,689	\$ -
	Visitor Center operations	\$	395,988	13.61	\$	202,743	\$ -
	Interpretive media	\$	150,047	1.20	\$	72,492	\$ -
	Visitor Safety Services	\$	7,305,908	121.72	\$	3,591,812	\$ 635,015
	Visitor Services Office	\$	58,844	2.00	\$	-	\$ -
	Subtotal	\$	9,131,088	\$ 167	\$	4,434,527	\$ 635,015
Facility Operations							
	Campgrounds	\$	1,648,405	39.37	\$	655,216	\$ 52,380
	Road Operations (grooming, striping)	\$	631,745	9.27	\$	322,544	\$ -
	Utility Operations	\$	1,636,956	17.10	\$	777,038	\$ -
	Janitorial	\$	87,748	-	\$	87,748	\$ -
	Buildings	\$	1,406,914	18.10	\$	869,962	\$ -
	Grounds & Lakes	\$	1,945,309	32.93	\$	938,766	\$ 62,660
	Hazmat	\$	-	-	\$	-	\$ -
	General Management	\$	538,533	8.00	\$	538,533	\$ -
	Subtotal	\$	7,895,610	\$ 125	\$	4,189,808	\$ 115,040
Maintenance							
	Road and Parking Maintenance	\$	933,869	0.60	\$	258,627	\$ 669,696
	Fleet Maintenance	\$	249,861	4.40	\$	86,337	\$ 53,632
	Utility Maintenance	\$	344,587	5.00	\$	20,577	\$ -
	Building Maintenance	\$	1,106,176	9.00	\$	-	\$ 789,041
	Subtotal	\$	2,634,493	\$ 19	\$	365,541	\$ 1,512,368
Management & Administration							
	Communication	\$	753,932	15.72	\$	540,638	\$ -
	Planning/Constituent Relations	\$	547,495	8.00	\$	356,536	\$ -
	Safety & Public Health	\$	62,137	2.00	\$	62,137	\$ -
	Public Affairs	\$	114,384	2.60	\$	65,340	\$ -
	Outreach & Partnerships	\$	-	-	\$	-	\$ -
	General Management	\$	262,212	3.00	\$	262,212	\$ -
	General Administration	\$	1,302,269	20.00	\$	759,122	\$ 224,983
	Subtotal	\$	3,042,430	\$ 51	\$	2,045,986	\$ 224,983
Resource Protection							
	Natural Resource Mgt	\$	1,175,699	23.02	\$	552,331	\$ 115,000
	Natural Resource Monitoring	\$	577,872	10.02	\$	172,456	\$ 1,751
	Natural Resource Research	\$	101,212	2.52	\$	50,651	\$ 2,626
	Natural Resource Compliance	\$	94,022	1.15	\$	88,088	\$ -
	Cultural Resource Mgt	\$	146,130	1.79	\$	118,078	\$ -
	Cultural Resource Compliance	\$	106,346	2.75	\$	48,962	\$ 8,000
	Cultural Resource Research	\$	25,526	0.25	\$	19,806	\$ -
	Info. integration & analysis	\$	211,069	6.08	\$	75,293	\$ 4,376
	Subtotal	\$	2,437,876	\$ 48	\$	1,125,665	\$ 131,753
GRAND TOTAL							
		\$	25,141,496	\$ 410	\$	12,161,527	\$ 2,619,160

LAKE MEAD NATIONAL RECREATION AREA						
	FY98 Funding				Shortfall	
Reimbursable	Revenue	Donations	Total	Current FTE	FTE	Funding
\$ 39,512	\$ -	\$ -	\$ 283,978	5.50	(0.96)	\$ (43,035)
\$ -	\$ -	\$ -	\$ 79,035	2.30	(10.20)	\$ (454,596)
\$ 8,000	\$ -	\$ -	\$ 73,290	1.90	(0.40)	\$ (19,618)
\$ -	\$ -	\$ -	\$ 178,689	5.20	(2.35)	\$ (88,060)
\$ -	\$ -	\$ -	\$ 202,743	2.10	(11.51)	\$ (193,245)
\$ -	\$ -	\$ 45,687	\$ 118,179	1.00	(0.20)	\$ (31,868)
\$ 214,440	\$ 1,178	\$ -	\$ 4,442,446	57.80	(63.92)	\$ (2,863,462)
\$ 50,872	\$ 7,973	\$ -	\$ 58,844	2.00	-	\$ -
\$ 312,823	\$ 9,151	\$ 45,687	\$ 5,437,204	\$ 78	\$ (90)	\$ (3,693,883)
\$ 4,417	\$ 30,018	\$ -	\$ 742,031	7.20	(32.17)	\$ (906,373)
\$ 7,978	\$ -	\$ -	\$ 330,523	7.00	(2.27)	\$ (301,223)
\$ 474,254	\$ -	\$ -	\$ 1,251,291	10.90	(6.20)	\$ (385,664)
\$ -	\$ -	\$ -	\$ 87,748	-	-	\$ -
\$ 264,516	\$ -	\$ -	\$ 1,134,478	12.90	(5.20)	\$ (272,436)
\$ 11,314	\$ -	\$ -	\$ 1,012,740	10.80	(22.13)	\$ (932,569)
\$ -	\$ -	\$ -	\$ -	-	-	\$ -
\$ -	\$ -	\$ -	\$ 538,533	8.00	-	\$ -
\$ 762,479	\$ 30,018	\$ -	\$ 5,097,345	\$ 57	\$ (68)	\$ (2,798,265)
\$ 307	\$ -	\$ -	\$ 928,630	0.50	(0.10)	\$ (5,239)
\$ 678	\$ -	\$ -	\$ 140,647	2.10	(2.30)	\$ (109,214)
\$ 118,149	\$ -	\$ -	\$ 138,726	2.00	(3.00)	\$ (205,861)
\$ -	\$ -	\$ -	\$ 789,041	4.00	(5.00)	\$ (317,136)
\$ 119,134	\$ -	\$ -	\$ 1,997,043	\$ 9	\$ (10)	\$ (637,450)
\$ 63,771	\$ -	\$ -	\$ 604,408	12.72	(3.00)	\$ (149,524)
\$ -	\$ -	\$ -	\$ 356,536	6.00	(2.00)	\$ (190,959)
\$ -	\$ -	\$ -	\$ 62,137	2.00	-	\$ -
\$ -	\$ -	\$ -	\$ 65,340	1.60	(1.00)	\$ (49,044)
\$ -	\$ -	\$ -	\$ -	-	-	\$ -
\$ -	\$ -	\$ -	\$ 262,212	3.00	-	\$ -
\$ 57,064	\$ -	\$ 46	\$ 1,041,215	17.00	(3.00)	\$ (261,054)
\$ 120,835	\$ -	\$ 46	\$ 2,391,849	\$ 42	\$ (9)	\$ (650,581)
\$ 91,701	\$ 15,000	\$ -	\$ 774,033	8.45	(14.56)	\$ (401,667)
\$ 80,181	\$ -	\$ -	\$ 254,388	1.90	(8.12)	\$ (323,484)
\$ 9,135	\$ -	\$ -	\$ 62,412	1.35	(1.17)	\$ (38,801)
\$ -	\$ -	\$ -	\$ 88,088	1.05	(0.10)	\$ (5,934)
\$ -	\$ -	\$ -	\$ 118,078	1.20	(0.59)	\$ (28,053)
\$ 1,400	\$ -	\$ -	\$ 58,362	0.15	(2.60)	\$ (47,983)
\$ -	\$ -	\$ -	\$ 19,806	0.15	(0.10)	\$ (5,719)
\$ 9,135	\$ -	\$ -	\$ 88,805	3.37	(2.72)	\$ (122,265)
\$ 191,553	\$ 15,000	\$ -	\$ 1,463,971	\$ 18	\$ (30)	\$ (973,905)
\$ 1,506,824	\$ 54,169	\$ 45,733	\$ 16,387,412	\$ 203	\$ (207)	\$ (8,754,084)

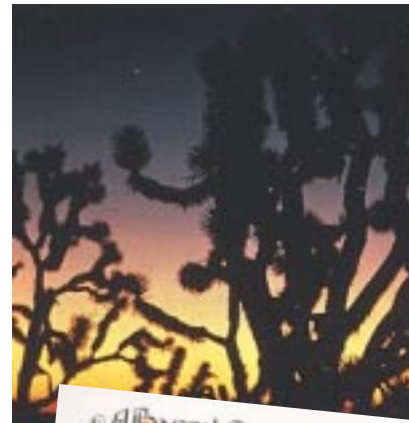
Investment Needs

In addition to the above noted operations and maintenance budget and staffing shortfalls, Lake Mead NRA presently manages an estimated \$1 billion infrastructure in support of visitor use and enjoyment.

The park's infrastructure is deteriorating from excessive age, over use and inadequate designs. Major investments are required to upgrade existing facilities to meet today's regulatory standards, changing user needs, and to meet visitor expectations of quality.

Lake Mead NRA has a total investment shortfall of \$185 million including \$9.7 million in outstanding land protection needs. At the FY98 investment rate of \$5.7 million, it will take over 32 years to address today's shortfall. This time frame needs to be accelerated.

Lake Mead NRA Investment Needs Shortfalls	
	Investment Need
Visitor Experience and Enjoyment	18,600,000
Facility Operations	65,000,000
Maintenance	77,000,000
Management & Administration	3,000,000
Resource Protection	11,800,000
SUBTOTAL	175,400,000
Land Protection	9,750,000
TOTAL	185,150,000
FY98 Investments	5,695,878
Years to complete	32.5



Historical Analysis

Key Cost Drivers

- Eroding budgets
 - Inflation
 - Increase in average cost of employees
- Deteriorated infrastructure
- Increased visitation
- Adjacent urbanization
- Increased regulatory requirements /new mandates
- Employees off duty or on light duty due to injury
- Costs of accidents/vehicle damage



Since FY'90, Lake Mead NRA has seen a significant increase in operational appropriations, going from a \$6.4 million base budget in FY'90 to a base budget of just over \$12 million in FY'98. Considering inflation, the park's FY'90 budget equals \$8.2 million in FY'98 dollars, a real increase of just under \$4 million. So why is the park presently facing a \$9.6 million operational shortfall?

In addition to inflation and the increased costs of doing business, increased visitation, old worn-out facilities, adjacent urbanization and implementation of new mandated compliance with federal and state regulations have all contributed to the park's operational shortfall. Between FY'90 and FY'98, the park's personnel costs increased by \$5 million. This included the creation of a desperately needed resource management program, which went from a staff of 3 employees to a staff of 14 employees, at a cost of \$800,000. Utilities saw a \$250,000 increase during this period, without the addition of new facilities. Since FY'94, park staffing levels have remained constant, while the costs of doing business and workload demands have continued to increase.

Lake Mead NRA is the only park with a union agreement that includes collective bargaining for its wage grade employees. As a park, Lake Mead NRA has had to absorb the additional costs of mandated law enforcement background investigations, required physicals, enhanced annuity retirement benefits, increased number of more expensive FERS-covered employees (benefits increasing from 18 to 35 percent per employee), and increased General Service Administration vehicle costs. Also, due to the construction boom in southern Nevada, Lake Mead NRA contract bids are coming in at an estimated 10% higher than in the past.

In the early '90s, the park was beginning to make incremental progress towards addressing a large operational shortfall. In the mid to late '90s, operational increases were less significant and fell far short of increased costs. There is now genuine concern about the park's deteriorating conditions and its ability to provide a quality visitor experience over time. It is the park's vision to make Lake Mead NRA the premier inland water recreation area in the west. This will require a substantial infusion of increased support, sustained over time. The two most critical shortfalls at Lake Mead NRA are in the maintenance and visitor protection functions. However, interpretive/education and resources stewardship programs are also in need of dollar infusions.

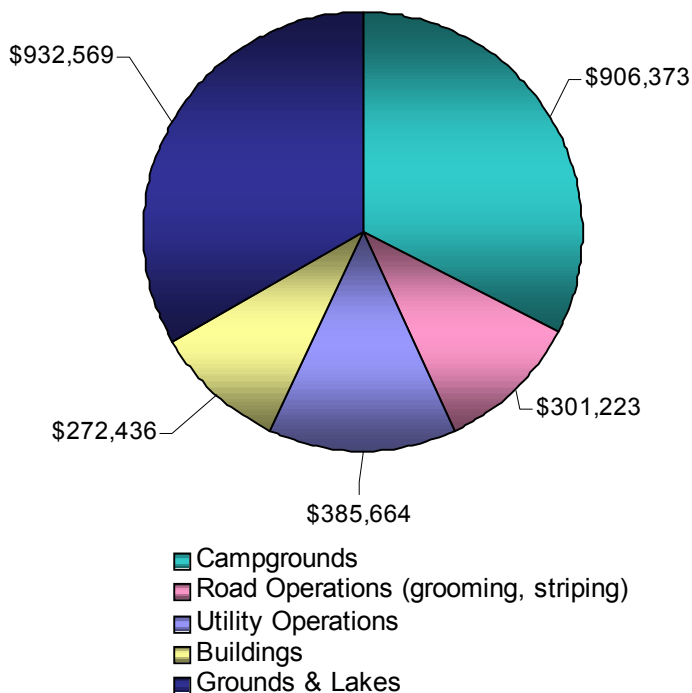
Facilities Operation And Maintenance

The facility infrastructure at Lake Mead NRA is estimated to be valued at \$1 billion dollars. It includes 348 buildings and structures; 56 living quarters and 12 trailer sites; 55 historic structures; two radio systems with a general channel, marine band and law enforcement band, which also includes over 325 mobile and portable radios and 4 repeaters; 2 flash flood warning systems with 12 rain gauges; 3 telephone systems; 13 developed campgrounds with 1,452 sites; 9 sanitary dump stations; 336 miles of paved roads and 816 miles of dirt roads; 13 paved launching ramps with 105 launching lanes; 3 airstrips (two paved); 15 paved parking lots with 2,502 marked parking sites and 17 dirt parking lots and areas with over 10,300 parking sites; 10 picnic areas with 128 picnic tables and 16 shelters; 3 amphitheaters with 700 seats; 9 water systems with over 5,500,000 gallons of storage capacity and 10 wastewater systems with over 35.5 acres of lagoons; 10 fish cleaners; and 3 government docks.

In the maintenance activity, National Park Service (NPS) staff can now only accomplish about 48 percent of the maintenance needed to meet defined minimal acceptable standards. This is difficult for the park to defend to stakeholders, especially park concessioners,

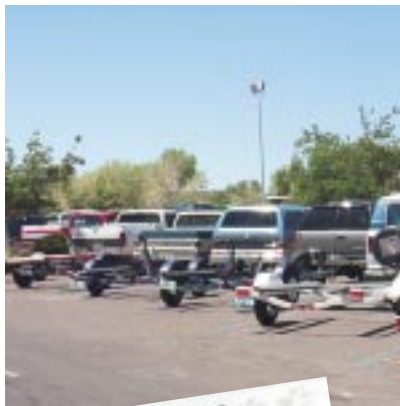


Facility Operations Shortfalls 1998
Total \$2,798,265

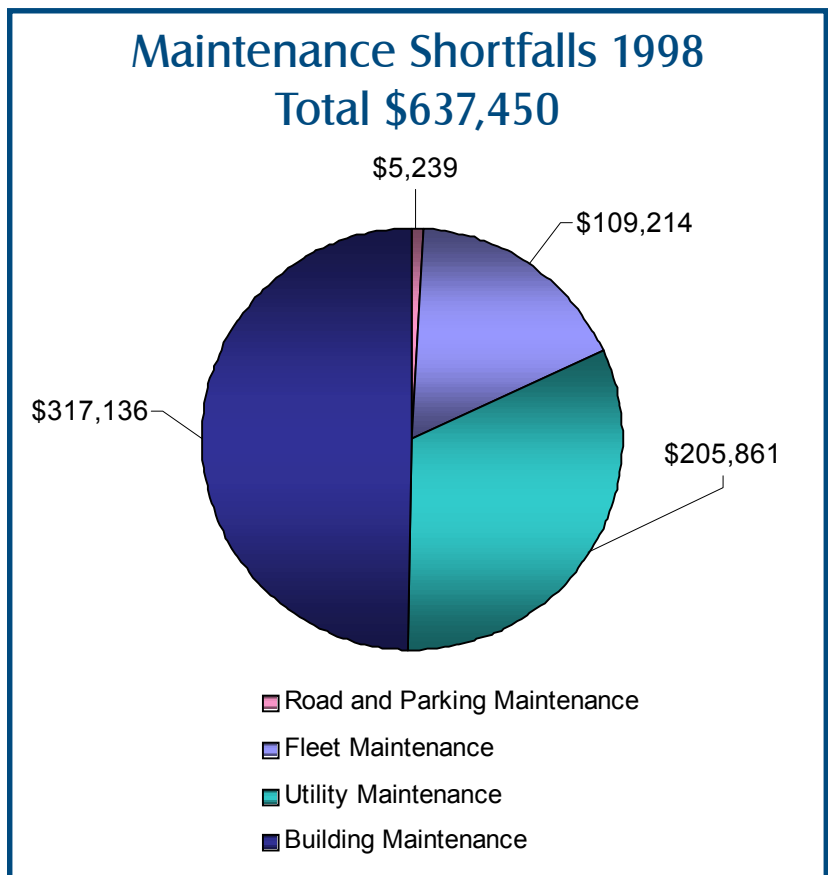




as they are held accountable to fully meet defined operational standards in their operations.



Lake Mead NRA has been aggressive in trying to supplement what can be done with paid NPS employees through increased efforts in recruiting volunteers and developing different partnerships. Parkwide, in fiscal year 1998 (FY98), there was over 108,000 hours of donated volunteer help, valued at approximately \$1.5 million and equivalent to 52 FTEs. Yet with the volunteers and partnerships, the park still only met about 55 percent of the defined minimal acceptable standards in its maintenance operations. More and more complaints are being received from the visiting public on the maintenance level of park facilities. In addition, volunteers cannot do everything. Many of the maintenance staff are required to have special certifications or licenses. For example, park staff are responsible for ensuring potable water meets federal and state regulations. To meet state standards, a certified operator should be in each water treatment plant whenever they are in operation, but with present staffing levels this is not possible, creating a potentially serious health risk. The number of park water plants and wells would require 13 certified operators for a minimally acceptable level of staffing, an operation presently staffed with only 6 people. Maintenance staffing deficiencies are most visibly evident in the amount of accumulated litter one sees along the road sides and





shoreline, in the condition of park restrooms and in sanitation conditions on the shoreline. In a recent visitor survey, lake visitors were asked to rate a number of visitor impact issues and identify to what extent they were a problem. Litter on the shore, litter in the lake, broken glass and human waste disposal were identified as four of the top problems facing park management. During the survey period, the monitoring of backcountry beaches identified that litter exceeded minimum park standards at many of the backcountry sites. With 950 miles of shoreline, the NPS is facing existing shoreline litter and sanitation problems that will only become more significant with increasing use. These are just the tip of the iceberg and representative of the problems which pervade the park's operational maintenance backlog.

The park's investment shortfall exceeds \$185 million even though over \$45 million in line-item construction and Federal Lands Highway Program funding and \$15 million in state and other governmental agency grants have been successfully secured since 1992 to assist with this shortfall. In addition, appropriate responsibilities have been transferred to private operators such as contracting for custodial and garbage collection services, to mention only a couple of the ongoing initiatives to reduce operational costs. However, much more needs to be done. The park staff is frustrated with the deteriorating conditions and what appears to be a losing battle. Lake Mead NRA lost 11 maintenance positions in the last few years due to this budget erosion situation. Also, the supplies and equipment budget is now less than 3 percent of the park's maintenance budget. This is hardly sufficient to buy even the very basic supplies like toilet paper and cleaning supplies, much less to buy replacements for worn out picnic tables, grills, sinks, and courtesy docks.

To address the park's facilities operations shortfall, \$2,798,265 and 68 FTEs will be required. The park's maintenance shortfall is \$637,450 and 10 FTE's. (Note: 1 FTE is equivalent to one person working one year.)



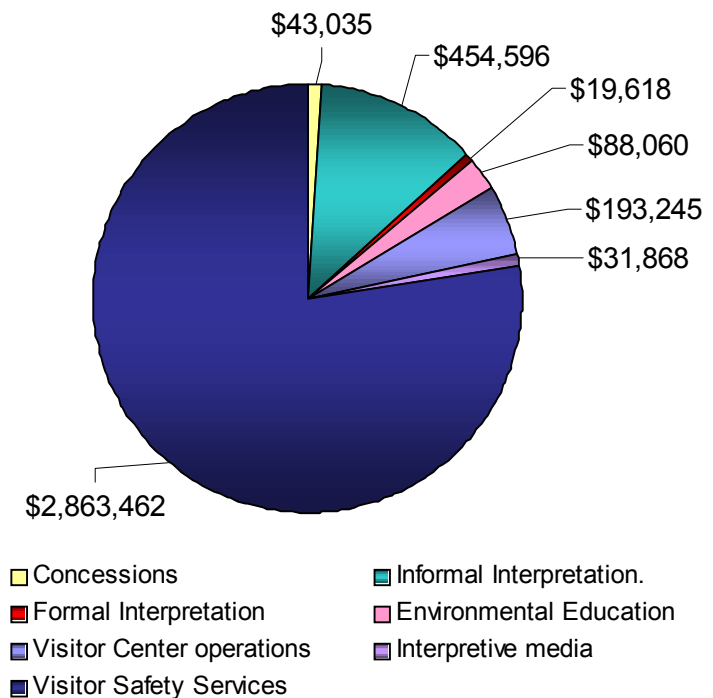


Visitor Experience and Enjoyment

In the visitor protection functions, a similar situation exists. Despite increasing visitation and pressures brought about by the adjacent urbanization, Lake Mead NRA has lost five permanent ranger positions and six seasonal ranger positions in the last 3 years. In addition, the case workload has increased over the past 3 years with no relief in sight. Lake Mead NRA has the largest emergency service, law enforcement, structural fire and resource protection workload in the National Park System. The ranger staff annually handles 15,000 incidents, including 350 class I (felony) crimes, 1,000 class 2 (non-felony) crimes, 450 arrests, 38 fatalities, 500 emergency medical cases, 4,000 roadway incidents and 2,600 boating incidents, 200 land search and rescues and 675 water search and rescues. In addition, the park has eight structural fire engines spread over the nine developed areas which must be staffed. The park's law enforcement staff is multi-talented and must be able to perform emergency medical, structural fire, search and rescue, visitor information, and resource protection functions in addition to law enforcement.

This workload is handled by a workforce of 45 enforcement rangers and a small support staff. An article on NPS law enforcement that

Visitor Experience & Enjoyment Shortfalls 1998 -Total \$3,693,883





appeared in the *Journal of the Association of National Park Rangers* shows Lake Mead NRA, by far, has the largest case load overall, yet its costs are very low when compared to the recreational user visit. In 1998, the Department of the Interior did a comprehensive review of Lake Mead NRA's law enforcement program. This was an impartial review to determine if the park was meeting minimal standards in the law enforcement program. The review found that Lake Mead had one of the most professional programs ever audited, but that it is severely understaffed. The report recommended that the park request additional funding to fill 34 additional law enforcement positions to meet minimal standards. The present limited staff makes it impossible to provide coverage that is needed on a 12-hour basis much less the 24-hour basis that should be covered in most areas of the park.

Lake Mead NRA feels its rangers do an exceptional job under very tense situations. The stress presently on the frontline staff is great which is of added concern as this stress tends to be cumulative over time. Elsewhere in Clark County, the law enforcement, fire and emergency response organizations have all sought, and most have received, major increases to deal with the explosive growth. As an example, the Metropolitan Police Department added some 500 employees in the last 24 months. Yet, Lake Mead NRA is not seeing comparable increases under similar conditions.

The NPS, in cooperation with the University of Nevada-Las Vegas and Pennsylvania State University conducted a survey of the visitors using Lakes Mead and Mohave as part of the Lake Management Plan that is nearing completion. The survey included 3,300 interviews and 1,500 mail-back questionnaires. As part of the survey, visitors were asked to rate potential management actions for Lake Mead NRA. Sixty-seven percent of lake users either favored or strongly favored that the NPS, "...provide aggressive enforcement of safety rules and regulations." In addition, over 40 percent of lake visitors responded that they observed unsafe boating situations on Lakes Mead and Mohave. Calls and letters that come into the Park often are asking for additional rangers, along with more and stricter regulation enforcement.

Lake Mead NRA's interpretive and education programs have also experienced budget erosion and reduction in staff over the past several years. A proactive information and education program is the most effective way to protect park resources, prevent visitor accidents, and create a constituency that will support the park and its programs. At the present time, interpretive programming is reaching less than 4 percent of the total number of visitors through personal contacts. Visitor center hours are reduced, and eight of the nine

visitor contacts stations are either closed or staffed part time by volunteers. Roving contacts, which are one of the most effective means of reaching the recreation visitor, need to be expanded, and the park needs to expand its educational, interpretive and outreach programs. The vast majority of visitors are not exposed to current and relevant information about the park because non-personal media (waysides, interpretive signs, orientation kiosks, films and exhibits) in many cases is not present. The media that is available is out of date and does not reflect the park's current management strategy.

Lake Mead NRA's popular and successful Environmental Education program cannot be expanded without additional funding. Current park staffing allows the accommodation of 11,000 students on the park's curriculum-based field programs and 20,000 students in its curriculum-based classroom outreach programs. Lake Mead NRA has developed an education program that is highly regarded by the teachers and administrators in the school districts surrounding the park. These districts are asking for greater participation in the education program but because of budget erosion, Lake Mead NRA is not able to continue to expand and meet the needs of the teachers in one of the fastest growing school districts in the nation. In fact the number of programs offered have had to be reduced because of staffing limitations. Existing programs were completely filled within 1.5 hours of opening them to reservations. More than 85 teachers are on waiting lists, and since many teachers are calling to schedule their whole grade level, this could mean that, at a minimum, 5,000 students that want to participate are not being served.

Lake Mead NRA's staff is presently only able to focus its main efforts on the elementary grades (K-5). There is a need to expand the program to develop effective education interfaces and experiences for the secondary schools (6-12), colleges and adult education. An active education program that spans the full spectrum of ages would provide new sources of support for the park. At the present time this expansion is not possible, without impacting current successful programs, which need to continue.

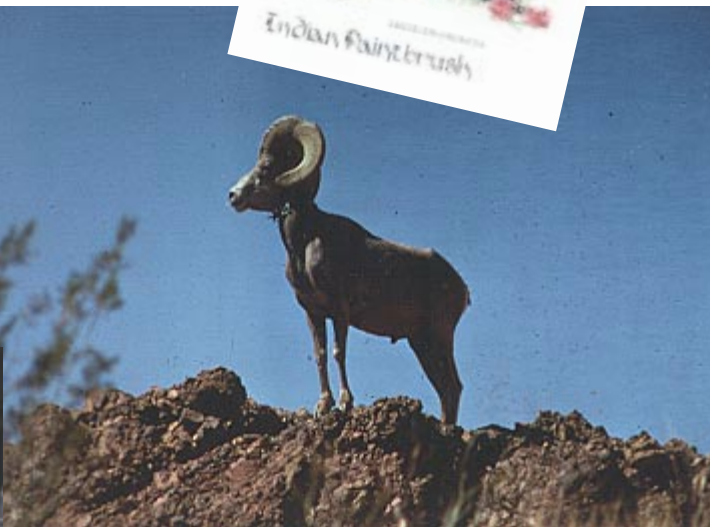
Lake Mead's concessions program is one of the largest and most complex in the entire National Park System, with visitor facilities in operation 365 days per year, and two different states having concurrent jurisdiction. All services and facilities require monitoring for compliance with federal, state, and local regulation, inclusive of laws concerning water quality, food service sanitation, hazardous and toxic material, underground fuel storage, visitor, safety, endangered species protection, and commercial passenger vessels. The diversi-



fication and complexity of the commercial visitor services, both land and water-based, provided by concessioners provide a unique challenge. In the nine developed areas within the recreation area, the concessioners provide approximately 3,600 slips for wet storage of vessels and 1,500 spaces for dry storage; 415 rental vessels, inclusive of approximately 160 rental houseboats; trailer villages with both short-term (345) and long-term (825) sites; 9 food service operations, ranging from a small food service to several restaurants, with a total of approximately 610 seats, and 6 cocktail lounges, with a total of approximately 325 seats; 4 motels, 1 hotel, and 6 rustic cabins, with a pillow count of 527 in 191 rooms. There is also a 100' triple-deck, 300-passenger tour vessel and water taxi with on-board food service, a river float trip, 9 merchandising stores (combined gift shop and grocery), fueling stations on land and water, boat repair facilities, and employee housing areas.

Lake Mead NRA is unique to the National Park System in that its concessions management responsibilities include multiple major concession contracts or permits (12) with gross revenues collectively exceeding \$44 million. There is also over 90 Incidental Business Permits, and 128 leases for vacation cabin sites.

Visitor experience and enjoyment shortfalls total \$3,693,883 and 90 FTEs.



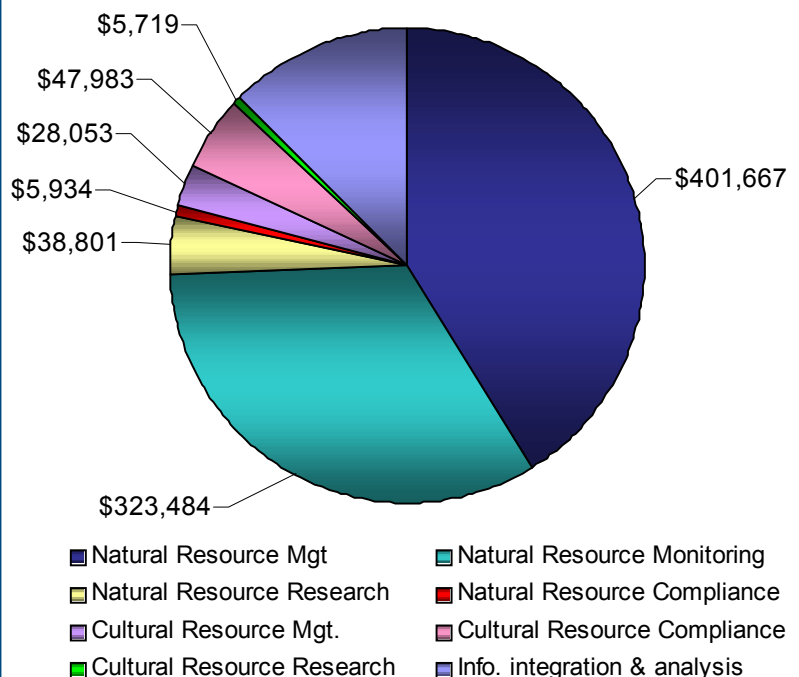


Resource Protection

Lake Mead NRA is responsible for the protection of natural and cultural resources across 1.5 million acres, including 1.3 million acres of land, and 200,000 acres of impounded water along 142 miles of the Colorado River. The area encompasses portions of two States, and requires coordination and negotiation with three Bureau of Land Management (BLM) Districts (in two state offices), two state wildlife agencies (Nevada, Arizona), two State Historic Preservation Offices, the Lower Colorado Regional Office of the state and federal regulatory agencies. In addition the park does consultations with 12 tribal nations that claim affiliation to the Lake Mead NRA area. The impounded waters of Lakes Mead and Mohave provide significant recreational opportunities and economic benefits within the region and provide the drinking water for 20 million downstream users.

The protection of the park's resources requires fostering working partnerships with a variety of agencies, institutions and groups within the Mojave Desert region. These include active participation in two thirty-year Habitat Conservation Plans; the Clark County, NV Multi-Species Conservation Plan covering over 3 million acres in Clark County, Nevada and the Lower Colorado River Multi-Species Plan, covering over 500 miles of the Colorado River in three states. The park is also involved in the Mojave Desert managers interagency resource management and science plans for 25 million acres of the

Resource Protection Shortfalls 1998 - Total \$973,905



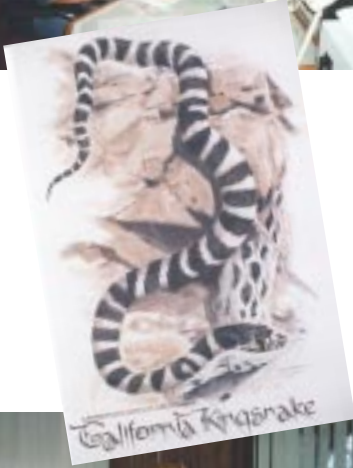
Mojave Desert and the Shivwits/Parashant 600,000 acre multi-agency management resource protection and management plan. Each of these planning initiatives, along with the park's own resource protection plan, requires inventory, monitoring and active resource management strategies.

Back in the early 1990s, Lake Mead NRA's resource stewardship programs received a major boost in funding. This allowed the park to establish a strong core natural and cultural resource management program. The park has made major advances in areas such as tamarisk removal, spring restoration, fire management, burro removal, application of computer mapping (geographic information system) and desert restoration. For example, more than 30 of the park's 40 known desert springs have been treated for tamarisk removal and restoration. Lake Mead NRA hopes to build upon this core over time; however, budget erosion is starting to reduce even its core capabilities. At the same time, park resources are at additional risk from encroaching urbanization and outside impacts. The water quality issue in Las Vegas Wash and Las Vegas Bay is an example of this. The park has no professional capability to meet its critical needs in the water quality area. While certain of the needed monitoring programs can be accomplished by other agencies or temporary programs, the park needs a funded program for water quality management. Maintaining the outstanding features of Lakes Mead and Mohave, their clarity and beauty, has been identified as a critical resource issue by park visitors. The park needs a professional water program to be able to present its unique goals in a credible and effective fashion to work within the interagency arena towards resolution of Lake Mead water quality issues. To establish a park based water quality program to meet staffing and research needs would require a \$350,000 addition to the park's base funding.

The park's critical resource protection function shortfall, including the water quality program, is \$973,905 and 30 FTEs.

It is well known that Lake Mead NRA lies in the fastest growing region of the United States from the Laughlin (Nevada)/Bullhead City (Arizona) area on its southern end to the ever-expanding Mesquite/Southern Utah area on its north. In between lies the booming population of the Las Vegas Valley. On its Arizona side, the once small communities of Meadview and Dolan Springs are beginning to increase in population, and small development areas are springing up along U.S. Highway 93. Privately owned lands within the park boundary are being offered for sale, and Lake Mead NRA is concerned about impacts should they be developed. Of the 10,000 acres of privately owned land within the boundaries of Lake Mead National Recreation Area, 6,500 acres is identified for





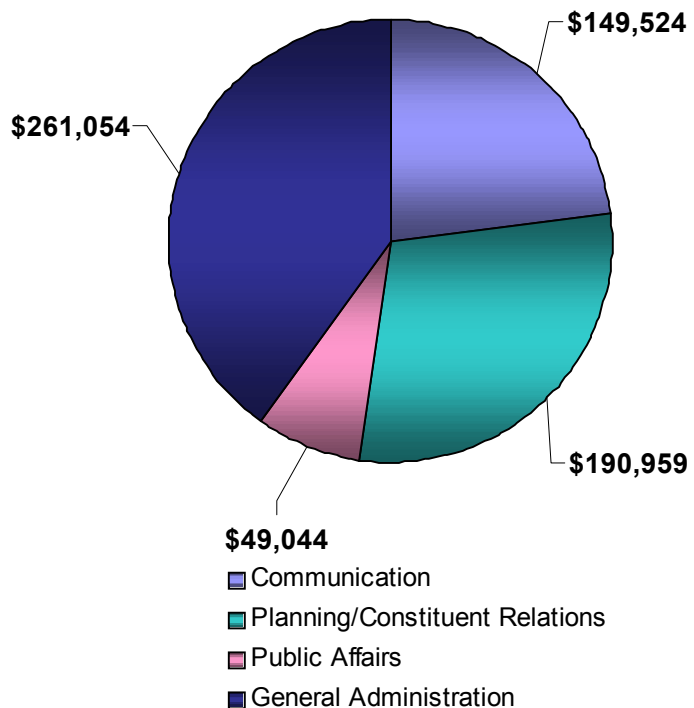
acquisition at an estimated value of \$3,250,000. A total of 2,500 acres of State trust lands within the boundary are also identified for acquisition through an exchange with the State of Arizona. In addition, there are privately held subsurface mineral rights owned by the Santa Fe Railroad, which they obtained as part of its land grants during the western expansion. If these rights were developed, they could substantially impact natural, cultural and recreational resources. These mineral rights were offered for sale to the NPS in 1972 for a price of \$6.5 million for the 59,000 acres held. In 1992, the Santa Fe Railroad again expressed an interest in divesting these rights; however, no current appraisal exists.

Management And Administration

As has already been noted, Lake Mead National Recreation Area is a large, complex unit of the National Park System. Overall management and administration functions include: communications (radio and dispatch, phones, computer support), planning and design, outreach and partnerships, general management (vision and program direction), and general administration (property management, property and inventory tracking, human resources, volunteer program, and financial services).

The management and administration shortfall is \$605,081 and 9 FTEs.

Management & Administration Shortfalls 1998 - Total \$605,081



Park Response

In response to the operations and maintenance, FTE and investment shortfalls, the following cost reduction and funding increase strategies are either already being used or are planned for implementation in the near future.

I. Cost Reduction Strategies

- A. **Transfer of increased operations and maintenance** responsibilities in heavily developed concessions areas **to concessioners** to free NPS staff to focus on less developed areas, roadways, lake shore, etc.
- B. **Upgrade existing facilities** through a variety of NPS and alternative support funding sources in an attempt to **reduce routine maintenance** costs and/or operational costs.
 - 1. Fish cleaner improvements
 - 2. Conversion to automatic drip irrigation
 - 3. Municipal water hookup
 - 4. Energy conservation
 - 5. Realigning Lakeshore Road
- C. **Close facilities such as campground loops, during times of under-utilization.**
- D. **Reduce accidents/injuries**
 - 1. Enhance commitment to safety
 - 2. Better manage structured return-to-work program
 - 3. Establish procedures for removal when light-duty alternative positions do not exist
- E. **Contract for services**
 - 1. Garbage collection
 - 2. Custodial Work (offices)
- F. **Add operational responsibilities to Special Use Permits**
 - 1. Litter cleanup
 - 2. Garbage collection
 - 3. Restrooms
 - 4. Parking control
- G. **Negotiate compatible adjacent land uses**
 - 1. BLM Resource Management Plans
 - 2. Clark County Multi-Species Plan
- H. **Enhance operational efficiency**
 - 1. Established Utility Branch
 - 2. Increased communications between Union/Management
 - 3. Maximized use of alternative support
- I. **Land Exchanges**

Park Response

II. Increase Support Strategies

A. Recover Out of Pocket Costs

1. Increase utility rates to fully recover costs
2. Increase cabin-site rates to reflect FMV appraisals
3. Recover out-of-pocket costs associated with special events
4. Recover cost of rights-of-way

B. Increase Alternative Staffing Support

1. Expand program for seeking alternative support (VIPs, SCAs, YCCs, Americorp, Title V, JTPA, alternative sentencing, prison crews, PLC, etc.)
2. Better train staff for alternative support management/supervision roles.

C. Increase Alternative Funding Support

1. Donation boxes/forms
2. Public agency grants (NDOW, SLIF, Title 28, TEA21 etc.)
3. Private nonprofit grants
4. Private donations
5. Outside Vegas public lands partnership
6. Southern Nevada Public Lands Management Act
7. Clark County Multi-Species Habitat Conservation Plan
8. Lower Colorado River Multi-Species Habitat Conservation Plan

D. Expand Fee Program

1. Entrance Stations/80% fee money
2. Campgrounds/80 % fee money
3. 80% concessions money
4. Special Use Permit fees
5. Right-of-way fees

E. Line-Item/FLHP

1. Target existing facility health/safety priorities over \$500,000 in magnitude

F. Other NPS Funding Sources

1. Target priority projects meeting specific funding source criteria.

G. ONPS

1. For funding core staff and operational costs.

Strategy for Addressing Lake Mead NRA Operations and Maintenance Shortfalls

Total Funding Need		Cumulative Shortfall	Notes
Operations & Maint. Need	\$ 25,000,000.00		
Proposed Entrance Stations	\$ 1,000,000.00		1
Sub-Total	\$ 26,000,000.00		
		\$ 26,000,000.00	
Existing Sources of Support			
Appropriated Base	\$ 12,200,000.00		
Appropriated One Time	\$ 2,600,000.00		
Reimbursables	\$ 1,500,000.00		
Revenues	\$ 54,000.00		
Donations	\$ 46,000.00		
Sub-Total	\$ 16,400,000.00		
		\$ 9,600,000.00	
Target Funding Sources/ Cost Cutting Strategies			
VIP's/Alternative Labor Sources	\$ 900,000.00		2
Transfer Responsibility to Conc.	\$ 300,000.00		3
Upgrade Existing Facilities	\$ 150,000.00		4
Increase Utility Rates	\$ 200,000.00		5
Outside Vegas	\$ 100,000.00		6
Entrance Stations	\$ 120,000.00		7
80% Cost of Collections Money	\$ 800,000.00		8
Close Facilities In Off Season	\$ 50,000.00		9
Reduce Lost Time Accidents	\$ 15,000.00		10
Service Contracts	\$ 50,000.00		11
SUP Fees/Responsibilities	\$ 10,000.00		12
Enhanced Operation Efficiency	\$ 20,000.00		13
Compatible Land Uses	\$ 20,000.00		14
Recover Out of Pocket Costs	\$ 10,000.00		15
Sub-total	\$ 2,745,000.00		
		\$ 6,855,000.00	16

- Notes:
1. Estimated phase I entrance stations costs of collection.
 2. 20% of \$3 million maint. deficiency, plus 10% of \$3 million Visitor Services deficiency.
 3. 10% of \$3 million maint. deficiency.
 4. 5% of \$3 million maint. deficiency.
 5. Estimated income from increased utility rates.
 6. 25% of estimated \$400,000 in support for environ. ed., and reduced costs due to messaging.
 7. 2% savings in \$6 million maint. and visitor services shortfalls-reduced litter, vandalism, enforcement.
 8. Estimated 80% monies available for costs of collections.
 9. Under-utilized campground loops, etc.
 10. Reduce by 100 lost work days at \$150/day for a \$15,000 savings.
 11. Cost savings achieved through increased efficiencies.
 12. Doubling the income and cost savings from 100 events/year.
 13. Restructuring efficiencies within organization.
 14. Estimated savings as a result of reductions in disturbed lands.
 15. Recovery of out of pocket costs associated with cabin sites, rights-of-way, etc.
 16. ONPS base increase required to cover operations and maintenance shortfall.

Lake Mead NRA

ONPS Funding Priorities

Lake Mead's Business Plan identifies an operations and maintenance funding need of \$26 million. Existing sources of support total \$16.4 million, leaving a shortfall of \$9.6 million. The park's strategy for addressing the identified shortfall includes targeting alternative funding sources and implementing cost cutting strategies, reducing the funding shortfall to \$6.9 million. Congressionally appropriated operational increases will be necessary to further reduce the shortfall. The following base increases (ONPS increases) are identified as priorities for future funding increases. (note: below priorities assume \$500,000 maintenance increase in FY2000)

1. Resource and Visitor Protection, Boulder Basin District	\$500,000	6 FTE
Increase will add 6 FTE to the Boulder Basin District to provide the extended coverage needed to respond to law enforcement, search/rescue, and medical and fire incidents. Increase will also result in increased preventative and informational services in the most visited area of the park.		
2. Safety and Resource Information, Parkwide	\$410,000	10 FTE
100,000 additional visitors would receive safety and resource information through increased hours of operation at visitor contact stations and expanded roving contacts in high visitor concentration areas. 10,000 more students would be reached through expanded school education programs.		
3. Cultural Resources and Water Quality, Parkwide	\$500,000	5 FTE
Increase would support the preservation of cultural resources and enable the park to initiate professional water management for two reservoirs, totalling over 225,000 surface acres. Park would be able to initiate monitoring of 1563 archaeological sites, inventory additional sites, better preserve 16 historic structures and provide curation of 13,000 museum objects. Park would hire professional staff to monitor water quality and to plan and negotiate for standard that will protect the health of visitors and the water quality of the lakes. Increase would enable park to comply with the applicable regulatory or legal requirements.		
4. Maintain Water Distribution System	\$500,000	4 FTE
The park is presently upgrading outdated water plants in response to a bilateral compliance agreement with the State of Nevada. This increase will allow the park to maintain these plants in conformance with federal and state law once they are completed. In addition, park would be able to initiate a maintenance program for the water distribution system, reduce water system related backlog of deferred maintenance, and begin to bring associated facilities up to applicable code requirements.		
5. Resource and Visitor Protection, Katherine	\$500,000	6 FTE
Increase will add 6 FTE to the Katherine area to provide the extended coverage needed to respond to law enforcement, search/rescue, and medical and fire incidents. Increase will also result in increased preventative and informational services in the second most visited area of the park.		

Strategy for Addressing Lake Mead NRA Investments Shortfalls

Investment Need	Shortfall	Target Funding Source	Annual Funding Target	Notes
Road Improvements	\$ 53,000,000.00	FLHP	\$ 5,000,000.00	1
Retrofit Existing Visitor Fac.	\$ 33,250,000.00	Entrance Station Fees	\$ 3,000,000.00	2
		Conc. Franchise Fees	\$ 900,000.00	3
Const. New Visitor Facilities	\$ 19,500,000.00	So. NV. Public Lands Act	\$ 1,250,000.00	4
		Outside Vegas	\$ 50,000.00	5
Upgrade Utility Systems	\$ 16,900,000.00	Line Item Construction	\$ 1,000,000.00	6
		Repair/Rehab.	\$ 200,000.00	7
Upgrade Bathroom/Sanitary Fac.	\$ 3,100,000.00	Alt. Fed./State Grants	\$ 200,000.00	8
Flood Mit. and Associated Dev.	\$ 32,000,000.00	Line Item Construction	\$ 1,000,000.00	9
Improve/Expand Admin. Facilities	\$ 7,000,000.00	Line Item Construction	\$ 500,000.00	10
Resource Projects	\$ 10,500,000.00	NRPP/Other	\$ 200,000.00	11
		Outside Vegas	\$ 50,000.00	12
Land Protection	\$ 9,750,000.00	Exchange	\$ 400,000.00	13
		So. NV. Public Lands Act	\$ 600,000.00	14
		LWCF	\$ 500,000.00	15
Totals	\$ 185,000,000.00		\$ 14,850,000.00	

Notes:

1. Projected annual FLHP funding
2. Projections are not valid until phase II entrance stations are completed
3. Pending establishment of Concessions 80% account
4. Estimated 1/4 share of 25% available from total \$20 million fund for infrastructure
5. Organization not yet running. Estimate is 25% of projected \$200,000 multi-agency annual investment.
6. Estimating at least one \$5 million project every 5 years.
7. Estimated annual R/R funding for projects under \$500,000
8. Estimated annual support from alternative Fed./State grants
9. Estimating at least one \$10 million project every 10 years
10. Estimating at least one \$5 million project every 10 years
11. Estimated annual NRPP, State and other support for resource projects
12. Organization not yet running. Estimate is 25% of projected \$200,000 multi-agency annual investment
13. Estimating \$2 million worth of land exchanges within 5 years
14. Estimating \$3 million worth of acquisition grants within 5 years
15. Estimating \$5 million worth of funding for acquisitions within next 10 years

Lake Mead NRA

Line Item Construction Priorities

Lake Mead has an investment shortfall of over \$185 million. The park's strategy for addressing the shortfall includes seeking funding support from a variety of traditional and nontraditional sources. Congressionally appropriated line item construction funding is one of the identified target funding sources. The following are Lake Mead's top line item construction funding priorities.

1. Structure Flood Mitigation, Willow Beach

\$9.7 million

The Willow Beach Development Area is one of three development areas on Lake Mohave, a 67-mile-long fresh water reservoir. In 1978, USGS completed a flood hazard analysis of the Willow Beach area, after 9 lives were lost in a flash flood at Eldorado Canyon in 1974. In 1994, an amendment to the Willow Beach Development Concept Plan and Environmental Impact Statement was completed, that reduces commercial overnight facilities but maintains Willow Beach as a developed area using structural flood mitigation. Structural flood mitigation is the first step in the implementation of the approved plan. Failure to implement the plan puts the public and facilities at risk and make the economic viability of future concession operations questionable.

2. Replace Asphalt Launching Ramps

\$3.2 million

The asphalt launch ramps on Lake Mead, that have been under water for a number of years, have deteriorated to the point that they are a continuous maintenance problem. The ramps have severe potholes, missing pavement and large areas of severe buckling. A visitor nearly drowned when his vehicle backed into one of the large potholes and the vehicle with him in it completely submerged underwater. The deterioration is compounded by the fact that most of these ramps are 30 years old or older. This project would replace seven asphalt launch ramps on Lake Mead and three on Lake Mohave with concrete ramps.

3. Structural Flood Mitigation, Cottonwood Cove

\$5.2 million

This project consists of the construction of structural flood mitigation for the Cottonwood Cove developed area. The protection plan which was developed by the Bureau of Reclamation in 1993. Existing facilities that would be protected by this project include two campgrounds with 149 sites, boat launching facilities, NPS housing and maintenance facilities, a 24 unit motel, 245 slip marina, 223 site long-term trailer village with 75 RV hookup sites, a convenience store, and a 40 seat restaurant. Failure to implement the plan puts park and concessioner staff, the public, and extensive visitor facilities at risk.

4. Replace Six Unserviceable Restrooms, Parkwide

\$5.5 million

This project consist of replacing the restrooms within the Katherine campground (3), Callville Bay campground (1), Echo Bay campground (1) and the Temple Bar campground (1). These restrooms were constructed in the late 1950's and the early 1960's, are significantly deteriorated, hard to maintain, out of compliance with existing codes, and have all outlived their useful life.

5. Structural Flood Mitigation, Katherine

\$4.4 million

This project consist of providing structural flood mitigation for the Katherine developed area. Facilities that would be protected include two campgrounds with 172 sites, boat launching lanes, 1,087 parking spaces, 18 picnic sites, 93 long-term trailer sites, 41 RV sites, 51 motel rooms, 824 boat slips, convenience store, and a 94 seat restaurant. Failure to implement the plan puts park and concessioner staff, the public, and extensive visitor facilities at risk.